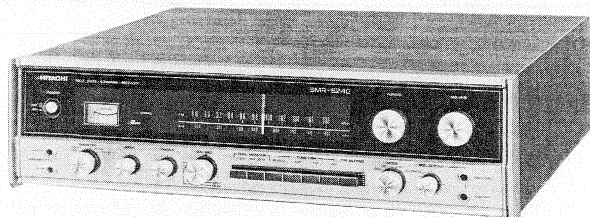
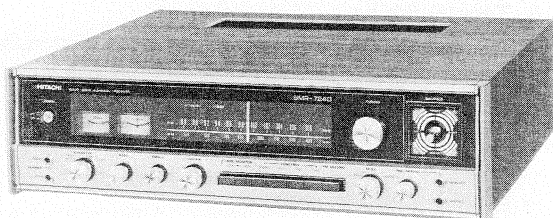


"PROJECT-O"



SMR-5240



SMR-7240



HITACHI HI-FI COMPONENT 4-CHANNEL STEREO RECEIVER

MODEL **SMR-5240**

MODEL **SMR-7240**

SERVICE MANUAL

NO. 73

1974

1. SPECIFICATIONS

FM SECTION

Frequency range	88-108MHz
Sensitivity (IHF)	2.2 μ V
Harmonic distortion	
Mono	0.3% (1kHz)
Stereo	0.8% (1kHz)
Capture ratio (IHF)	1.2dB
Signal-to-noise ratio	64dB
Stereo separation	36dB (1kHz)
Selectivity (IHF)	46dB
Image rejection	50dB
IF rejection	80dB
Spurious rejection	80dB
AM suppression	56dB
Antenna impedance	300 Ω

AM SECTION

Frequency range	530-1,605kHz
Sensitivity (IHF)	20 μ V
Signal-to-noise ratio	50dB
Image rejection	40dB
IF rejection	40dB

AUDIO SECTION

Music power (IHF)	
4-channel SMR-5240	65W (8 Ω , 1kHz, 1%)
SMR-7240	90W (8 Ω , 1kHz, 1%)
2-channel BTL SMR-5240	75W (8 Ω , 1kHz, 1%)
SMR-7240	100W (8 Ω , 1kHz, 1%)
RMS power/ch	
4-channel SMR-5240	10W $\times$ 4 (8 Ω , 1kHz, 1%)
SMR-7240	15W $\times$ 4 (8 Ω , 1kHz, 1%)
(4 channels driven)	
SMR-5240	7W $\times$ 4 (8 Ω , 20Hz-20kHz, 1%)
SMR-7240	10W $\times$ 4 (8 Ω , 20Hz-20kHz, 1%)
2-channel BTL SMR-5240	25W $\times$ 2 (8 Ω , 1kHz, 1%)
SMR-7240	35W $\times$ 2 (8 Ω , 1kHz, 1%)
(2 channels driven)	
SMR-5240	18W $\times$ 2 (8 Ω , 20Hz-20kHz, 1%)
SMR-7240	25W $\times$ 2 (8 Ω , 20Hz-20kHz, 1%)
Harmonic distortion	
at rated output	1% (1kHz)
at 1/2 rated output	Less than 0.2% (1kHz)

Intermodulation distortion

at rated output	1% (1kHz)
at 1/2 rated output	Less than 0.5% (60Hz:7kHz=4:1)
Frequency response (IHF)	20Hz-30kHz ($\pm$ 3dB)
Power bandwidth	20Hz-25kHz
	(1% THD at rated power)

Damping factor 40 (8 Ω , 1kHz)

Hum and noise (IHF)

Phono	60dB
Aux	70dB

Input sensitivity

MIC	3.5mV
Phono	3.0mV
Aux	200mV
Tape monitor	200mV
Phono overload	60mV (1kHz)

Tape out level

Tape out, 4-channel	200mV
Tape out, 2-channel (DIN)	45mV

Tone control

Bass	$\pm$ 11 $\frac{11}{16}$ dB (100Hz)
Treble	$\pm$ 13dB (10kHz)

Dimensions 19-1/4(W) $\times$ 5-3/8(H) $\times$ 15-3/8(D) in.
(49.0 $\times$ 13.6 $\times$ 39.0 cm)

Weight SMR-5240	23.1 lbs. (10.5kg)
SMR-7240	25.4 lbs. (11.5kg)

Auxiliary circuits

FM stereo indicator, 4ch balancer (SMR-7240), Mode indicator (2 CH, 4 CH) (SMR-5240), Mode indicator (2 CH, SQ, RM, DISC) (SMR-7240), Tuning meter (SMR-7240), Signal meter, Illuminated dial pointer, Speaker selector switch (4ch, Front, Rear, 2ch-BTL), 4ch headphone jacks, 2 microphone jacks, Microphone mixing volume control, 2 tape monitor switches, FM muting switch.

* The above specifications are subject to change for improvement without notice.

2. FEATURES

1. BTL (Balanced Transformer-Less) Circuitry

BTL circuitry provides with full 2-channel performance. Adding a further boost is a power amplifier design in which all four amplifiers are driven for 2-channel reproduction. BTL circuitry produces more than twice as much power per channel in the 2-channel mode than in the 4-channel mode because it provides optimal balancing of the two amplifiers providing power to a single speaker. The result is clear, distortion-free reproduction.

2. OCL (Output Capacitor-Less) Circuitry

The power amplifier stage has OCL circuitry that permits connection directly to the speaker system without a coupling capacitor. This advanced method of direct coupling results in better bass response, improved damping, and higher phase fidelity. With OCL circuitry on the job, reproduction is always clear, always satisfying.

3. Exceptionally Sensitive FM Reception

In order to take full advantage of today's multiple FM broadcasting, Hitachi has developed a tuner that enables exceptionally sensitive FM

reception. Sensitivity is complemented by advanced circuitry, which includes an MOS FET front end, and selectivity is assured by a ceramic filter and 2 IC's incorporated in the IF stage. It is a design that pulls in distant signals with as much ease as it pulls in signals from close-up stations. Reception is crisp and clear always.

4. Tape Dubbing

A feature usually found only on large expensive equipment. Two sets of tape deck inputs enable tape dubbing. This permits monitoring both radio programs being recorded and tapes being dubbed.

5. Speaker Selector Switch

The speaker selector switch lets the listener select or switch over to either of the front or rear speaker systems.

6. Microphone

Complementing all of the solid-sound benefits bring to music enjoyment is microphone mixing against the background of music-minus-one records and tapes. Twin microphone input terminals enable duets or vocal/instrument accompaniments.

3. DIFFERENCE OF SMR-5240 AND SMR-7240

3.1 SPECIFICATIONS

	SMR-5240	SMR-7240
Music power (IHF)	65W (8Ω, 1kHz)	90W (8Ω, 1kHz)
RMS power		
4-channel	10W×4 (8Ω, 1kHz)	15W×4 (8Ω, 1kHz)
(4 channel driven)	7W×4 (8Ω, 20Hz-20kHz, 1% THD)	10W×4 (8Ω, 20Hz-20kHz, 1% THD)
2-channel BTL	25W×2 (8Ω, 1kHz)	35W×2 (8Ω, 1kHz)
Power consumption	95W (110W)	130W (150W)

3.2 CIRCUIT AND REPLACEMENT PARTS

	SMR - 5240					SMR - 7240			
SYMBOL NO.	STOCK NO.	DESCRIPTION			STOCK NO.	DESCRIPTION			
R705(LF,RF)	0114149	Carbon film	560Ω±5%	SRD¼P	0114147	Carbon film	470Ω±5%	SRD¼P	
R705(LB,RB)	0114149	Carbon film	560Ω±5%	SRD¼P	0114145	Carbon film	390Ω±5%	SRD¼P	
R709 (LF,LB) (RF,RB)	0114167	Carbon film	1.8kΩ±5%	SRD¼P	0114169	Carbon film	2.2kΩ±5%	SRD¼P	
R710 (LF,LB) (RF,RB)	0114053	Carbon film	33Ω±5%	SRD¼P	0134294	Composition	27Ω±10%	RC½GF	
VR601 (LF,LB) (RF,RB)	0158001	100kΩ-(B)			0155001	100kΩ-(B)			
VR604 (LF,LB) (RF,RB)	0155461	250kΩ-(W)							
	2519904	Control printed wiring board assembly			2519901	Control printed wiring board assembly			
	2505012	Audio printed wiring board assembly (for U.S.A. & CANADA)			2505011	Audio printed wiring board assembly (for U.S.A. & CANADA)			
	2505014	Audio printed wiring board assembly (for Europe & England)			2505013	Audio printed wiring board assembly (for Europe & England)			
	2217831	Power transformer (for U.S.A. & CANADA)			2217821	Power transformer (for U.S.A. & CANADA)			
	2217861	Power transformer (for Europe & England)			2217851	Power transformer (for Europe & England)			
					2577127	Center meter			
					0159072	4 channel controller			
	3198951	Dial scale			3198961	Dial scale			
	3243011	Escutcheon assembly			3243012	Escutcheon assembly			
	3281872	Volume knob			3281852	Volume knob			
	3281853	Balance knob (for left-right)							
	3919571	Balance knob (for front-rear)							

4. FRONT AND REAR PANEL

SMR-5240 FRONT PANEL

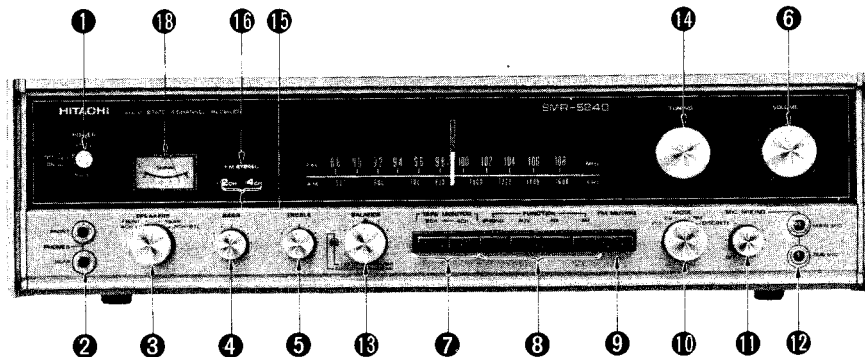


Fig. 1

- ① POWER SWITCH
- ② HEADPHONE JACK
- ③ SPEAKER SELECTOR SWITCH
- ④ BASS CONTROL
- ⑤ TREBLE CONTROL
- ⑥ VOLUME CONTROL
- ⑦ TAPE MONITOR SWITCH (2 CH, 4 CH)
- ⑧ FUNCTION SWITCH
- ⑨ FM MUTING SWITCH
- ⑩ MODE SWITCH
- ⑪ MIC MIXING VOLUME CONTROL
- ⑫ MICROPHONE JACK (MAIN, SUB)
- ⑬ BALANCE CONTROL
- ⑭ TUNING KNOB
- ⑮ MODE INDICATOR
- ⑯ FM STEREO INDICATOR
- ⑰ TUNING METER (SMR-7240 only)
- ⑱ SIGNAL METER

SMR-7240 FRONT PANEL

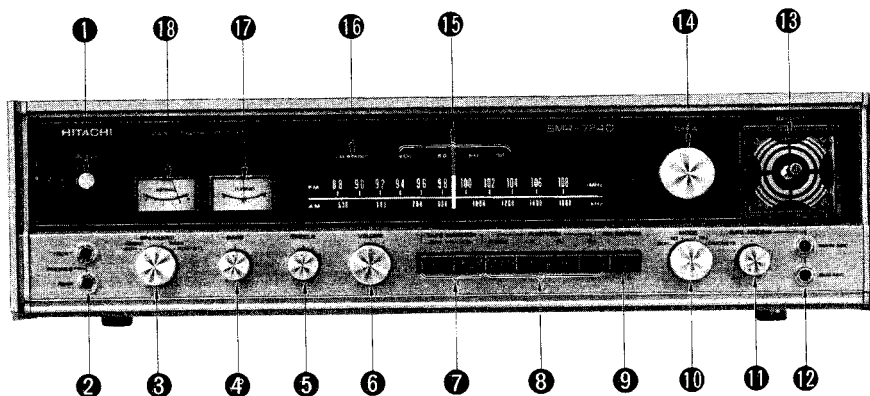


Fig. 2

- ⑲ FM ANTENNA TERMINAL
- ⑳ AM ANTENNA TERMINAL
- ㉑ PHONO 2 CH/4 CH SELECTOR SWITCH
- ㉒ PHONO 2 CH INPUT TERMINALS
- ㉓ PHONO 4 CH (CD-4) INPUT TERMINALS
- ㉔ AUX INPUT TERMINALS
- ㉕ AUX INPUT SELECTOR SWITCH
- ㉖ GROUND TERMINAL
- ㉗ 4 CH TAPE (REC/PB) TERMINALS
- ㉘ 2 CH TAPE (REC/PB) DIN CONNECTOR
- ㉙ SPEAKERS TERMINAL
- ㉚ AC POWER CORD
- ㉛ AC POWER FUSE
- ㉜ AC POWER OUTLET (For 120V set only)
- ㉝ DISCRI OUT TERMINAL

SMR-5240, SMR-7240 REAR PANEL

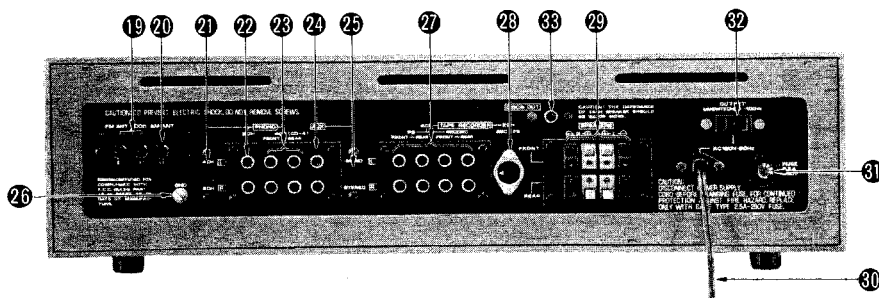


Fig. 3

4. FRONT AND REAR PANEL

SMR-5240 FRONT PANEL

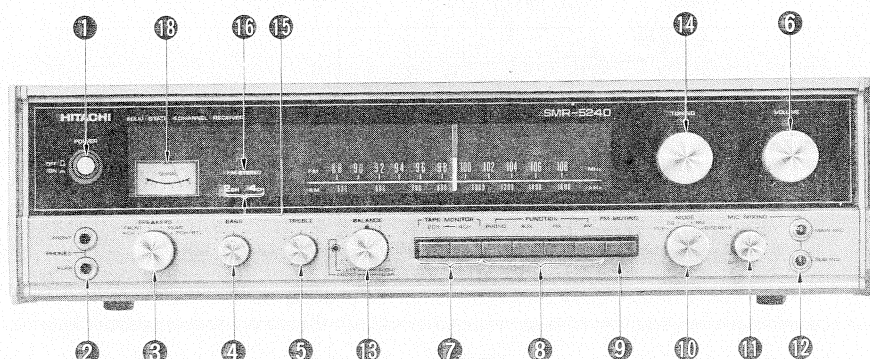


Fig. 1

- ① POWER SWITCH
- ② HEADPHONE JACK
- ③ SPEAKER SELECTOR SWITCH
- ④ BASS CONTROL
- ⑤ TREBLE CONTROL
- ⑥ VOLUME CONTROL
- ⑦ TAPE MONITOR SWITCH (2 CH, 4 CH)
- ⑧ FUNCTION SWITCH
- ⑨ FM MUTING SWITCH
- ⑩ MODE SWITCH
- ⑪ MIC MIXING VOLUME CONTROL
- ⑫ MICROPHONE JACK (MAIN, SUB)
- ⑬ BALANCE CONTROL
- ⑭ TUNING KNOB
- ⑮ MODE INDICATOR
- ⑯ FM STEREO INDICATOR
- ⑰ TUNING METER (SMR-7240 only)
- ⑱ SIGNAL METER

SMR-7240 FRONT PANEL

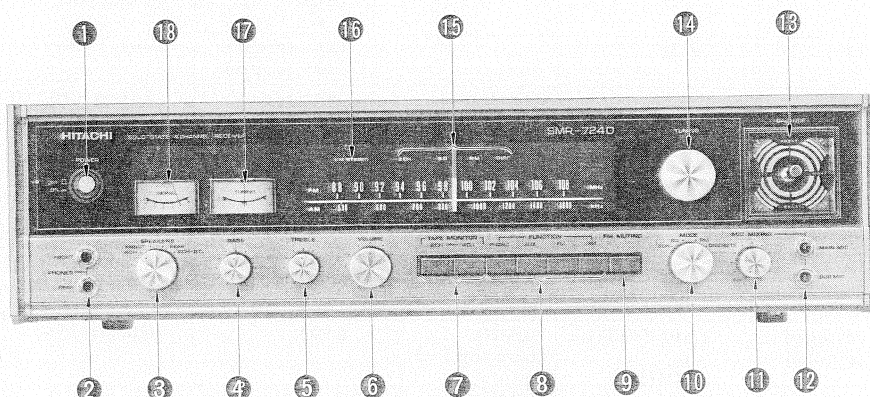


Fig. 2

- ⑱ FM ANTENNA TERMINAL
- ⑲ AM ANTENNA TERMINAL
- ⑳ PHONO 2 CH/4 CH SELECTOR SWITCH
- ㉑ PHONO 2 CH INPUT TERMINALS
- ㉒ PHONO 4 CH (CD-4) INPUT TERMINALS
- ㉓ AUX INPUT TERMINALS
- ㉔ AUX INPUT SELECTOR SWITCH
- ㉕ GROUND TERMINAL
- ㉖ 4 CH TAPE (REC/PB) TERMINALS
- ㉗ 2 CH TAPE (REC/PB) DIN CONNECTOR
- ㉘ SPEAKERS TERMINAL
- ㉙ AC POWER CORD
- ㉚ AC POWER FUSE
- ㉛ AC POWER OUTLET (For 120V set only)
- ㉜ DISCRI OUT TERMINAL

SMR-5240, SMR-7240 REAR PANEL

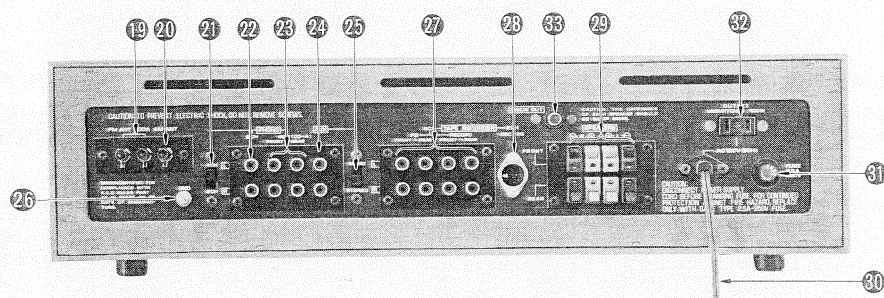


Fig. 3

MODEL SMR-5240 SMR-7240 SERVICE MANUAL

5. GENERAL ALIGNMENT INSTRUCTION

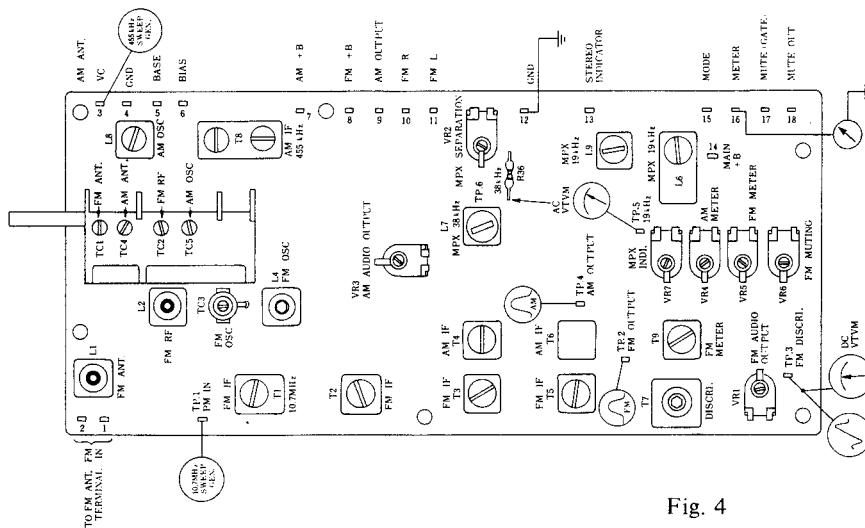


Fig. 4

5.1 FM TUNER ALIGNMENT

Steps	Item	Measuring Instrument	Input Terminal	Output Terminal	Frequency	Adjust	Wave Form
1	(1)	IF Amplifier	10.7MHz±150kHz Sweep Generator	TP 1	TP 2	T107 (upper) T109	Core Max.
	(2)					T101, T102 T103, T105	CAUTION (1)
	(3)	"S" curve		TP 1	TP 3	T107 (lower) T107 (upper)	CAUTION (2)
2	Discriminate	FM signal generator 100MHz 400Hz 100% modulated 60dB at input V.T.V.M.	Antenna terminal	TP 3 (DC balance meter)	100MHz	T107 (upper)	Adjust T107 so that pointer of Balance Meter will become 0V.
3	Distortion	FM signal generator 100MHz 400Hz 100% modulated 60dB at input Distortion meter	Antenna terminal	TAPE OUT(L) or SP OUT(L)	100MHz	T107 (lower)	Adjust T107 so that distortion will become min.
4	(1)	4.1 FM signal generator 90MHz 400Hz 100% modulated	Antenna terminal	TAPE OUT(L) or SP OUT(L)	90MHz (Turn the Dial pointer at 90MHz)	L104	Output Max.
	(2)	4.2 FM signal generator 106MHz 400Hz 100% modulated			106MHz (Turn the Dial pointer at 106MHz)	TC103	
	(3)						Repeat (1) & (2)
5	(1)	5.1 FM signal generator 90MHz 400Hz 100% modulated, 10dB at input V.T.V.M.	Antenna terminal	TAPE OUT(L) or SP OUT(L)	90MHz	L101, L102	Output Max.
	(2)	5.2 FM signal generator 106MHz 400Hz 100% modulated, 10dB at input V.T.V.M.			106MHz	TC101 TC102	
6	Tuning Meter	FM signal generator 98MHz 400Hz 100% modulated, 60dB at input	Antenna terminal	Tuning Meter	98MHz (Set the Tuning meter so that pointer will be max.)	VR105	Adjust VR105 so that pointer of Tuning meter will be 4.
7	Output	FM signal generator 98MHz 400Hz 30% modulated, 60dB at input	Antenna terminal	TAPE OUT	98MHz	VR101	Adjust the output to gain 200mV±2dB.
8	FM Muting	FM signal generator 98MHz 400Hz 100% modulated, 24dB at input	Antenna terminal	TAPE OUT(L) or SP OUT(L)	98MHz	VR106	Adjust VR106 so that a signal can occur then the input signal is 24±6dB.

CAUTION

- (1) At the article 1 - (2). By the core of T101, T102, T103 and T105 let it be adjusted so that the gain will be max. And the wave form should be adjusted so that it will be the one of the Fig.5. In this case, the output voltage at the surveying point of TP.2 is weak, so let it be adjusted by connecting shown at Fig. 6, using V.T.V.M. Next, adjust it by T109 core, so that the wave form of Fig.5 will dip just as Fig.7 and at this time of adjustment stop the oscillation. (Oscillation variable capacitor is shorted.)

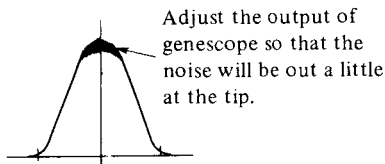


Fig. 5

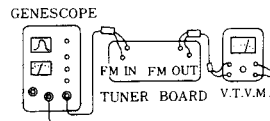


Fig. 6

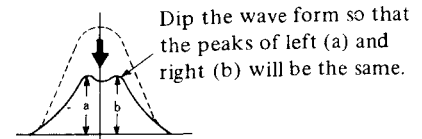


Fig. 7

- (2) At the article 1 - (3). Adjust so that it will be just as S curve of Fig. 8 with the secondary core (upper) of T107. And by the primary core (lower) of the T107, adjust it so that the gain will be max. In this case, A and B will be at the symmetry position of C, and adjust it as the straight line can be gained. At the time of adjustment of Caution (1) and (2), we use ceramic filter, so the center of the marker will not sometimes come on that of wave form. In this case, neglect the marker.

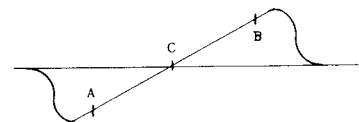


Fig. 8

5.2 FM MPX ALIGNMENT

Steps	Item	Measuring Instrument	Input Terminal	Output Terminal	Frequency	Adjust	Wave Form
1						VR107	Set the VR107 in the center.
2	(1) 19kHz 38kHz Tuning coil	FM signal generator 60dB at input Stereo signal generator pilot signal (19kHz) 8% modulated V.T.V.M.	Antenna terminal	TP 5	100MHz	L106, L109	Adjust L106 and L109 so that 19kHz. output wave form becomes max.
	(2)			TP 6		L107	Adjust L107 so that the (38kHz) output wave form becomes max.
3	Separation	1. FM signal generator 100MHz, 60dB at input 2. Stereo signal generator Main signal 92% modulated Pilot signal 8% modulated V.T.V.M.	Antenna terminal	FM OUT(L) or SP OUT(L)	100MHz		Set the tuning knob so that pointer of meter will become max.
						L109	After making the signal of L ch and Pilot, adjust L109 so that the output wave form of L ch becomes max.
						VR102	After making the signal of R ch and Pilot, adjust VR-102 so that the output wave form of L ch becomes min.
							Optimize VR102 so that the leak level of the L ch signal is equal to that of the R ch signal.
4	Lighting Level of STEREO Indicator Lamp	FM signal generator 100MHz 60dB at input Stereo signal generator pilot signal (19kHz) 5% modulated.	Antenna terminal	STEREO Indicator Lamp	100MHz	VR107	Adjust VR107 so that stereo indicator lamp will be lighted when the modulation degree of pilot signal is 5%.

5.3 AM TUNER ALIGNMENT

Steps	Item	Measuring Instrument	Input Terminal	Output Terminal	Frequency	Adjust	Wave Form
1	IF Amplifier	Sweep generator 455kHz	Antenna terminal	TP 4		T104, T108	Gain Max. CAUTION (3)
2	Covering	AM signal generator 600kHz 400Hz 30% modulated, 50dB at input V.T.V.M.	Ferrite antenna	TAPE OUT or SPOUT	600kHz	L108	Gain Max. CAUTION (4)
		AM signal generator 1400kHz 400Hz 30% modulated, 50dB at input V.T.V.M.			1400kHz	TC105	
3	Tracking	AM signal generator 600kHz 400Hz 30% modulated, 50dB at input V.T.V.M.	Ferrite antenna	TAPE OUT or SPOUT	600kHz	Ferrite antenna	Gain Max. CAUTION (4)
		AM signal generator 1400kHz 400Hz 30% modulated, 50dB at input V.T.V.M.			1400kHz	TC104	
4	Tuning Meter	AM signal generator 1000kHz 400Hz 30% modulated, 74dB at input	Ferrite antenna	TAPE OUT or SPOUT	1000kHz	VR104	Adjust VR104 so that pointer of meter will be 3.2.
5	Output	AM signal generator 1000kHz 400Hz 30% modulated, 74dB at input V.T.V.M.	Ferrite antenna	TAPE OUT	1000kHz	VR103	Adjust VR103 so that the output becomes 200mV±2dB.

CAUTION

- (3) At the article 1, adjust T104 and T108, so that the wave form will be as in Fig. 9. As T108 contains ceramic filter of 455kHz sometimes the center of the marker will not come on that of the wave form. In this case, neglect the marker.
- (4) At the article 2 and 3, at the time of the first adjustment, make input power at 74dB and as the adjustment goes on, make it the minimum and necessary input power (50dB).

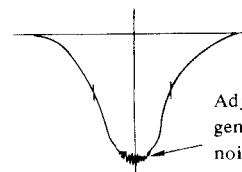


Fig. 9

5.4 AUDIO CIRCUIT ALIGNMENT

Steps	Item	Measuring Instrument	Point to be Measured	Adjust	Value Adjusted
1	Middle Point Voltage	DC volt meter	connect (+) terminal of DC volt meter to No. 22 connect (–) terminal of DC volt meter to Earth	VR 701LF	Steady state : $0\pm 50\text{mV}$
		VR 701RF (No. 17, Earth) VR 701LB (No. 7, Earth) : Adjust similarly VR 701RB (No. 14, Earth)			

6. DESCRIPTION OF NEW CIRCUIT

6.1 BTL (Balanced Transformer-Less)

The BTL is a power amplifier design in which all four amplifiers for 4-channel reproduction are driven for 2-channel reproduction as well. This special design produces more than twice as much power per channel in the 2-channel mode as it does in the 4-channel mode.

In the BTL design, when the two amplifiers are connected to drive a speaker, voltage per channel is doubled ($E_a + E_a'$) as shown in Fig. 10. Theoretically, as expressed in the relation $P = \frac{E^2}{Z}$ (P =power, E =voltage,

Z =impedance), power quadruples because voltage E is doubled with Z being constant. In actual BTL design, however, power does not show that much increase because of compensation in consequential increase in distortion.

Fig. 11 shows the effect on RMS power output per channel when switching from the 4-channel mode to BTL 2-channel is made. The Hitachi receiver, which has 15W RMS power per channel in the 4-channel mode, boasts 35W RMS power per channel in the 2-channel mode, both at 8 ohms, 1% distortion, a 2.3 times increase in power.

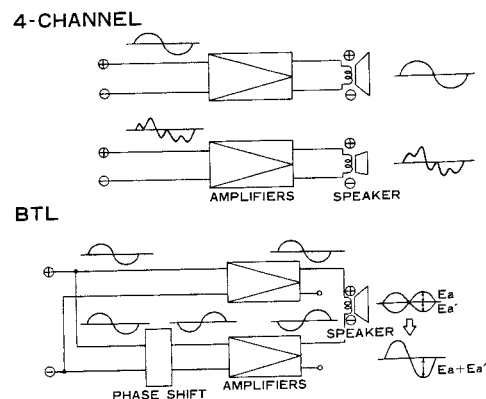


Fig. 10

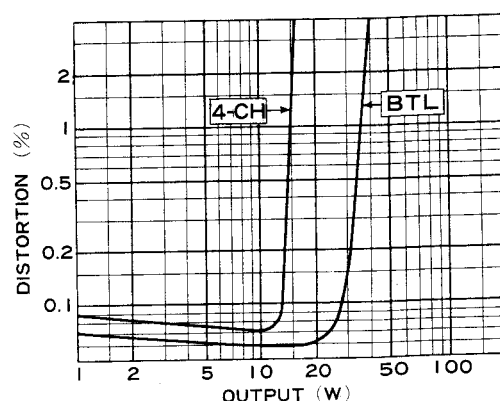


Fig. 11

6.2 OCL (Output Capacitor-Less)

OCL is a power amplifier design connecting output stage to the speaker system without a coupling capacitor (Fig. 13). This advanced direct coupling method improves bass response (see Fig. 12) and reduces distortion at frequencies below 100 Hz (see Fig. 14). This leads to a wider power bandwidth as well as improved damping at low frequencies.

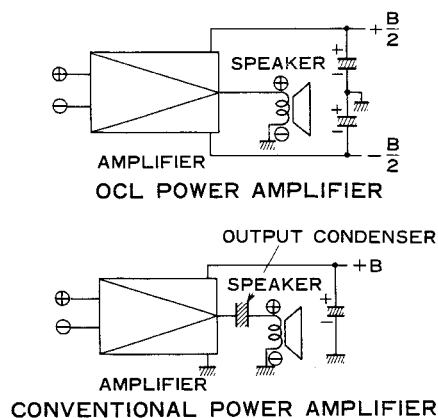


Fig. 13

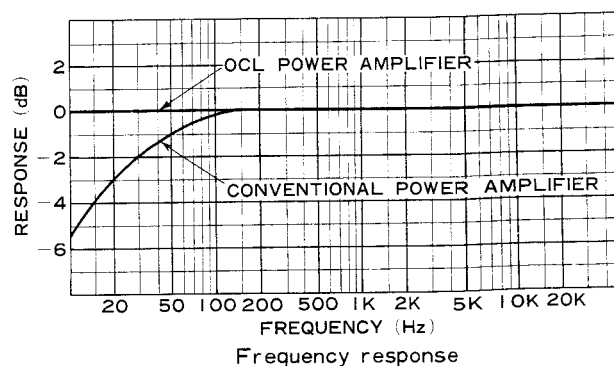


Fig. 12

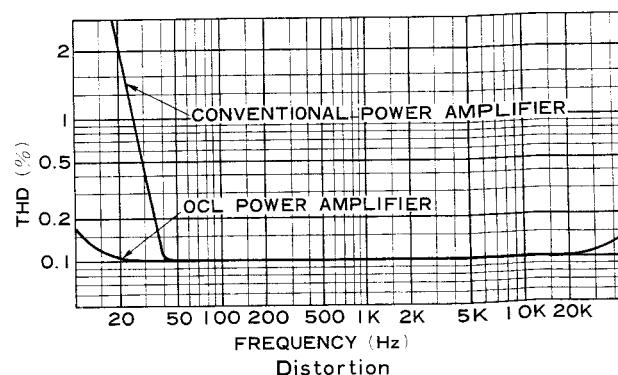


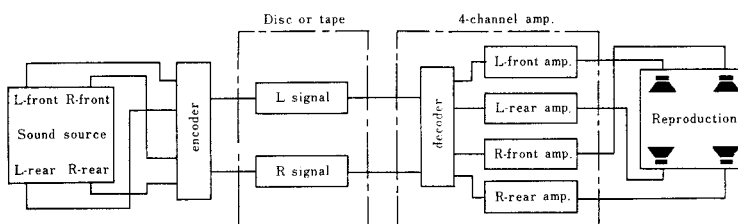
Fig. 14

7. DISCRETE OR MATRIX 4 - CHANNEL SYSTEM

Owing to the different acoustic conditions between the actual music hall and the listening room of stereo reproduction, the feeling of hall echo or presence could not be reproduced with the conventional 2-channel stereo system. The 4-channel stereo system

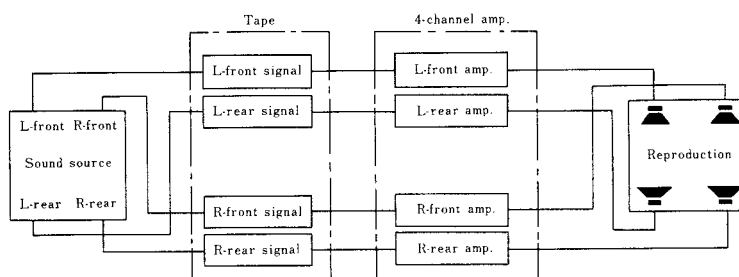
has been devised in order to obtain the ample feeling of hall presence by reproducing the echo component through not only front but also rear pairs of speakers.

■ Matrix 4-Channel system (SQ matrix, Regular matrix)



Four sound signals are combined to two signals in recording, and later they are decomposed to four sound signal again to be reproduced from 4 speaker systems.

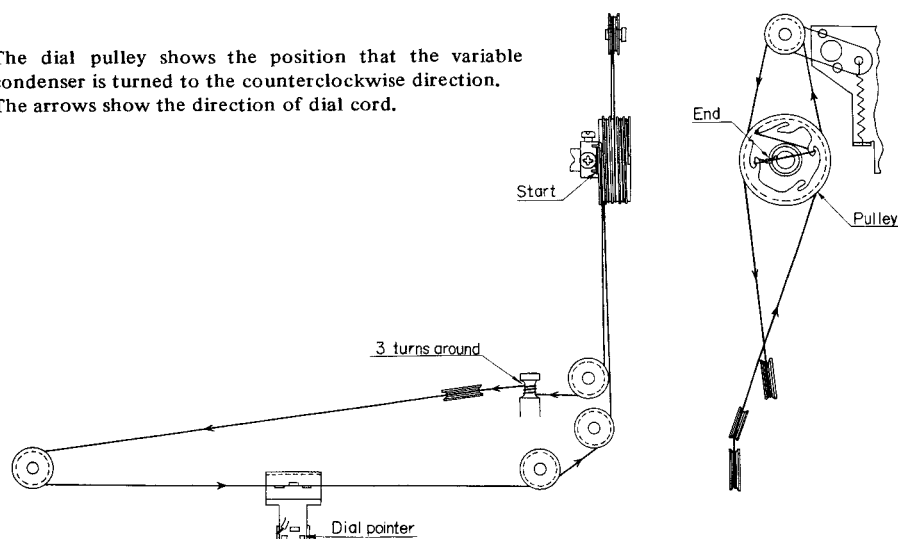
■ Discrete 4-Channel system



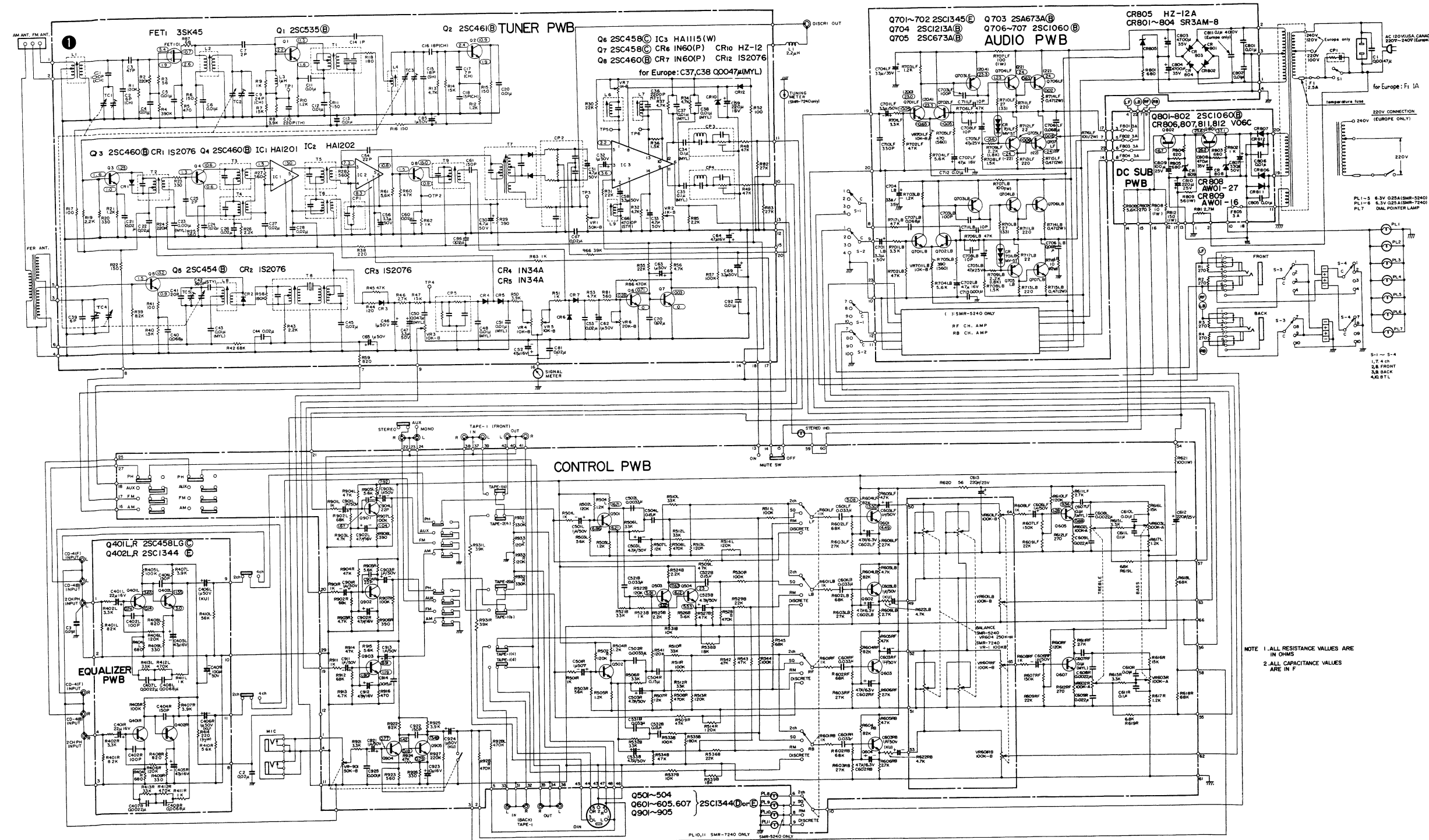
Four sound signals are recorded independently on tape, and then reproduced from 4 speaker systems.

8. DIAL CORD SETTING

- Note: 1. The dial pulley shows the position that the variable condenser is turned to the counterclockwise direction.
2. The arrows show the direction of dial cord.



9. CIRCUIT DIAGRAM

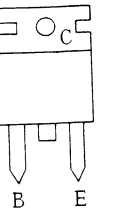


2SC461
2SC458
2SC458LG
2SC460
2SC454

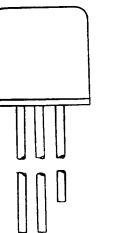
2SA673A
2SC1213A
2SC535
2SC1344



2SC1060

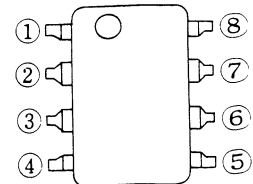


3SK45



1. DRAIN
2. GATE 2
3. GATE 1
4. SOURCE

HA1201
HA1202

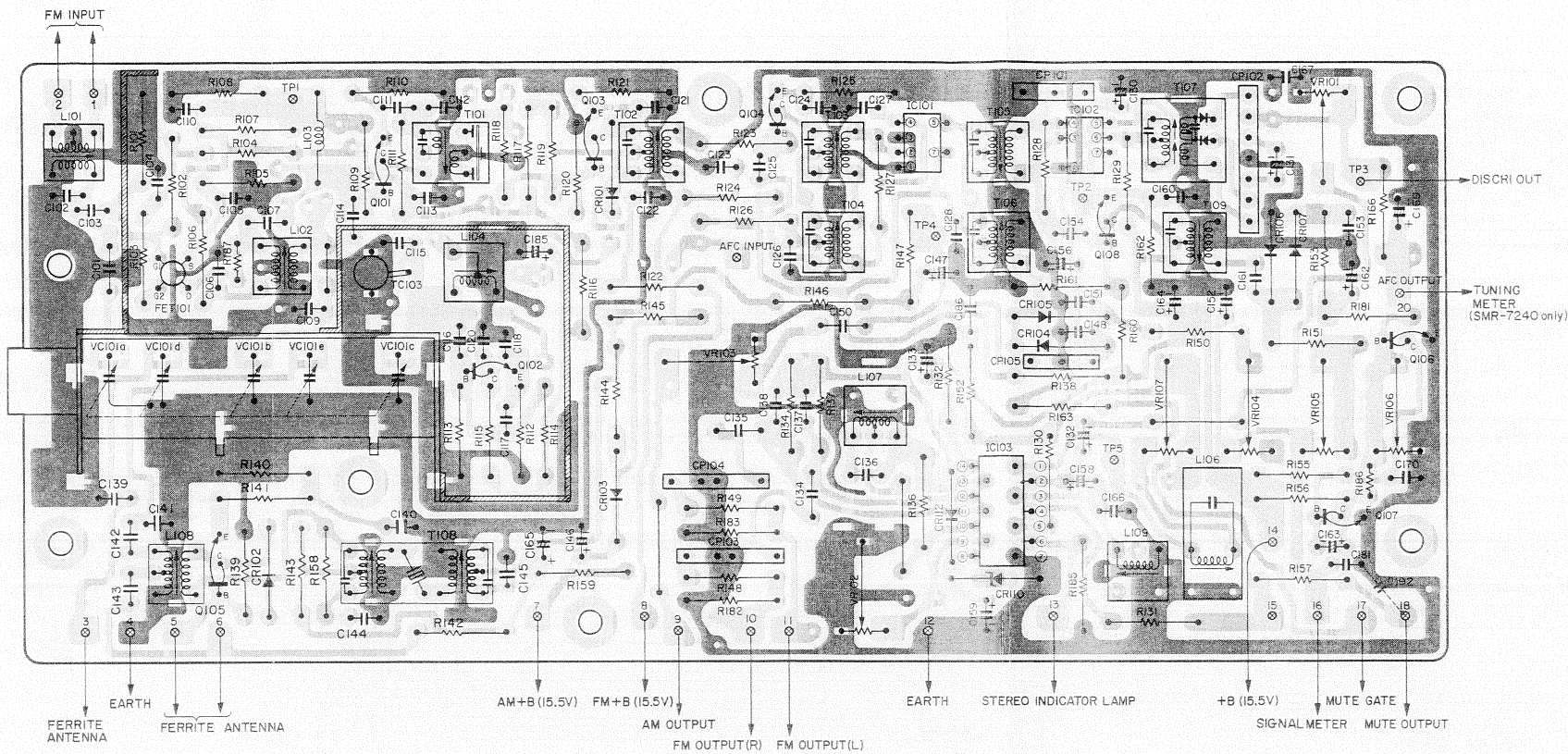


HA1115W

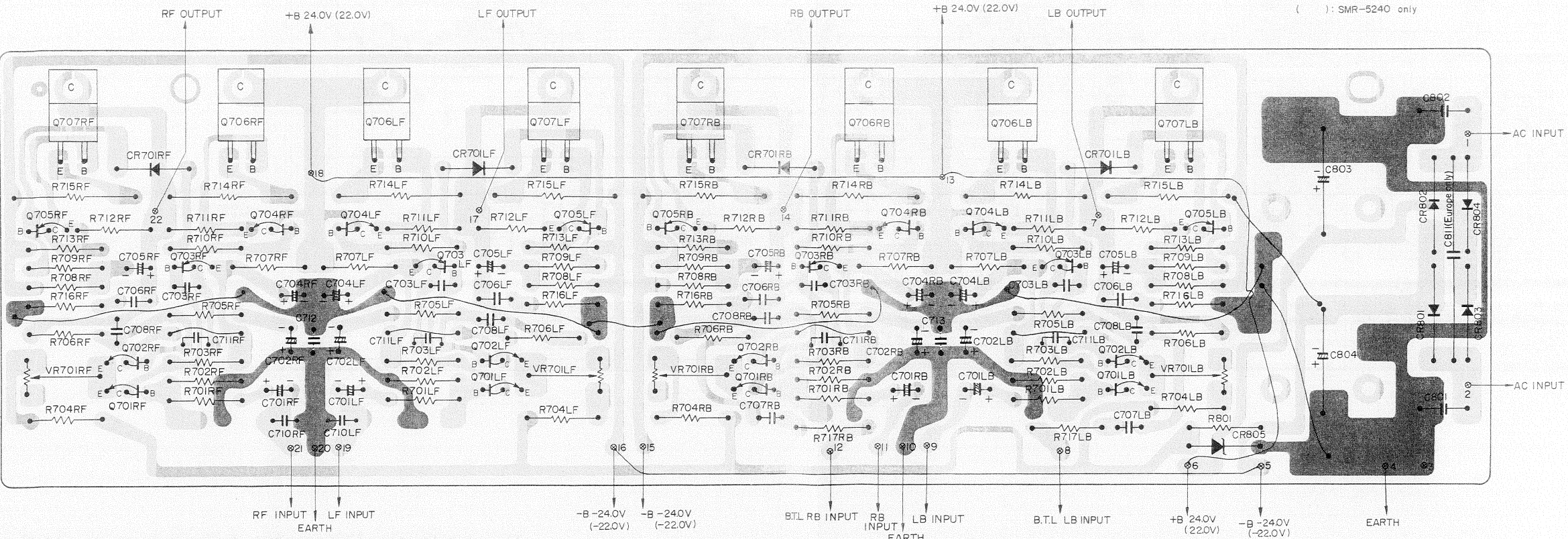
The circuit diagram is subject to change for improvement without notice.

10. PRINTED WIRING BOARD

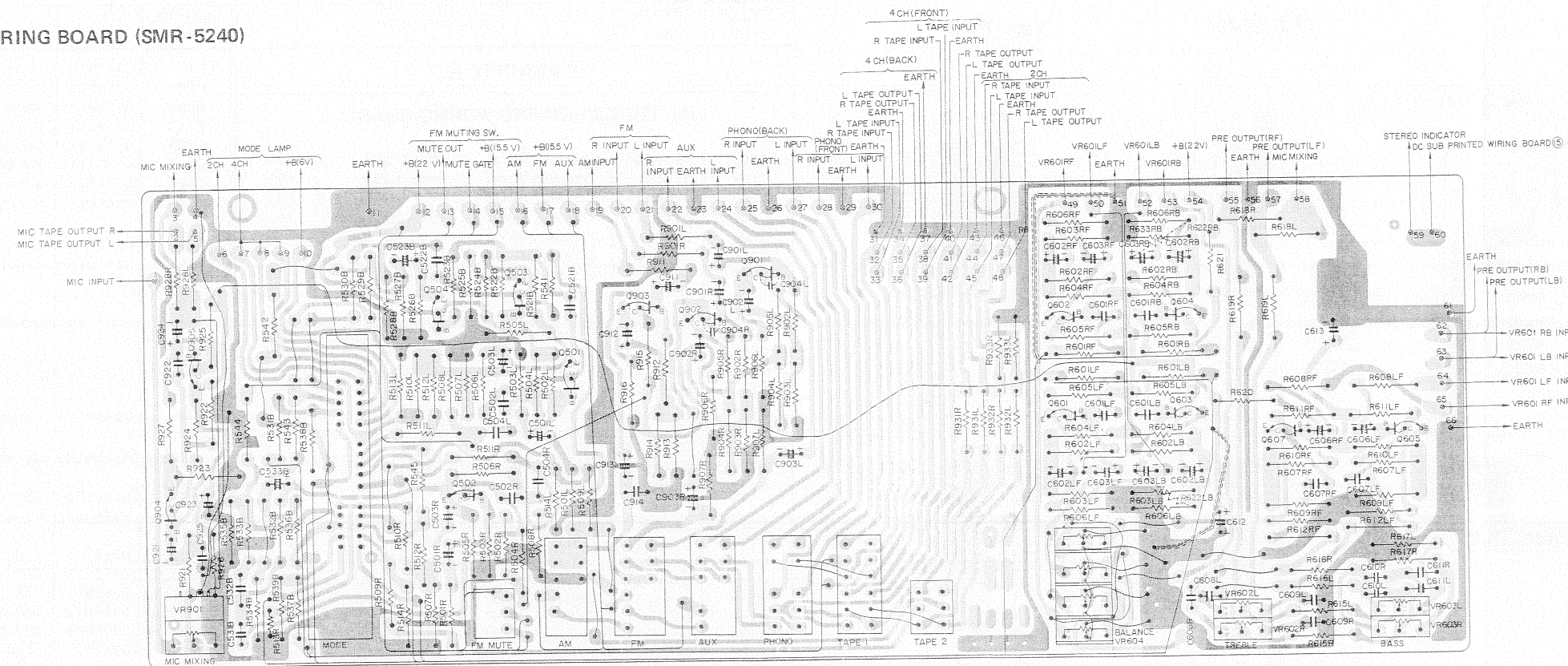
TUNER PRINTED WIRING BOARD



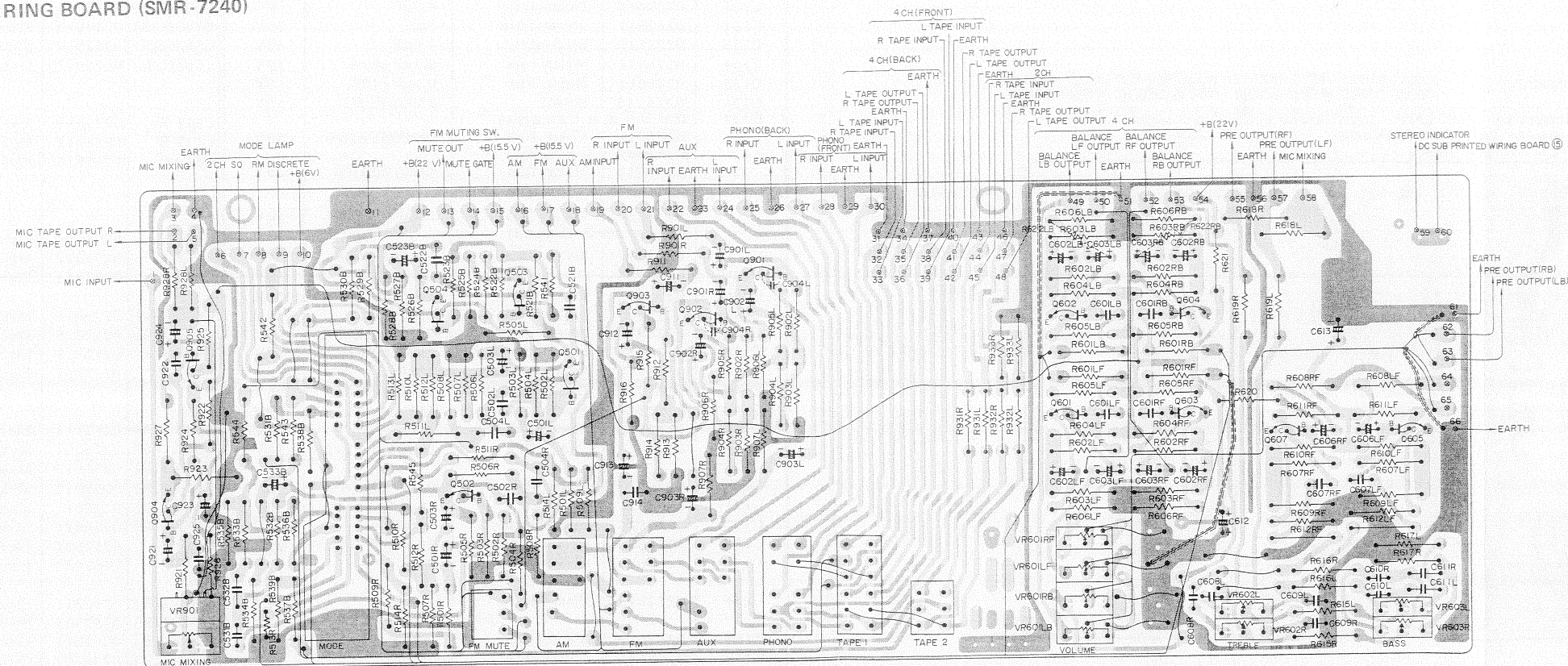
AUDIO PRINTED WIRING BOARD



CONTROL PRINTED WIRING BOARD (SMR-5240)

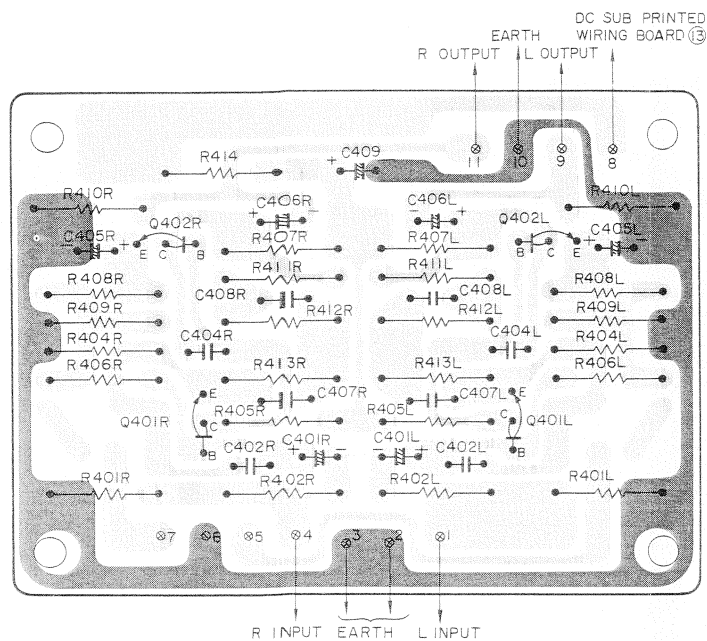


CONTROL PRINTED WIRING BOARD (SMR-7240)



MODEL SMR-5240 SERVICE MANUAL SMR-7240

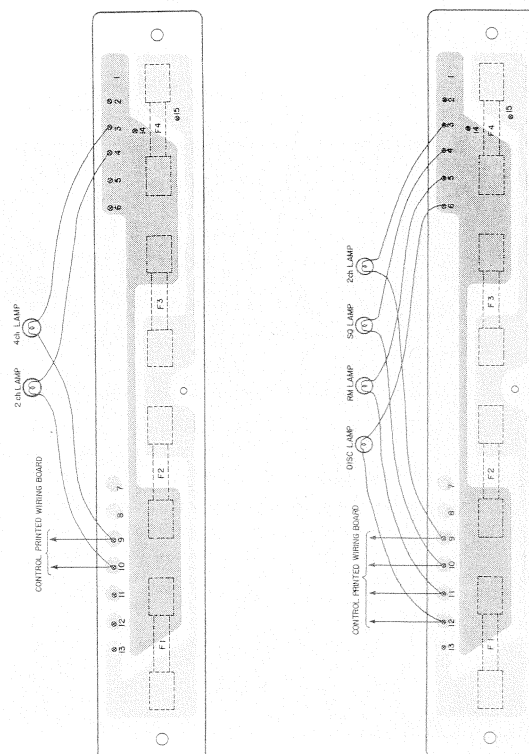
EQUALIZER PRINTED WIRING BOARD



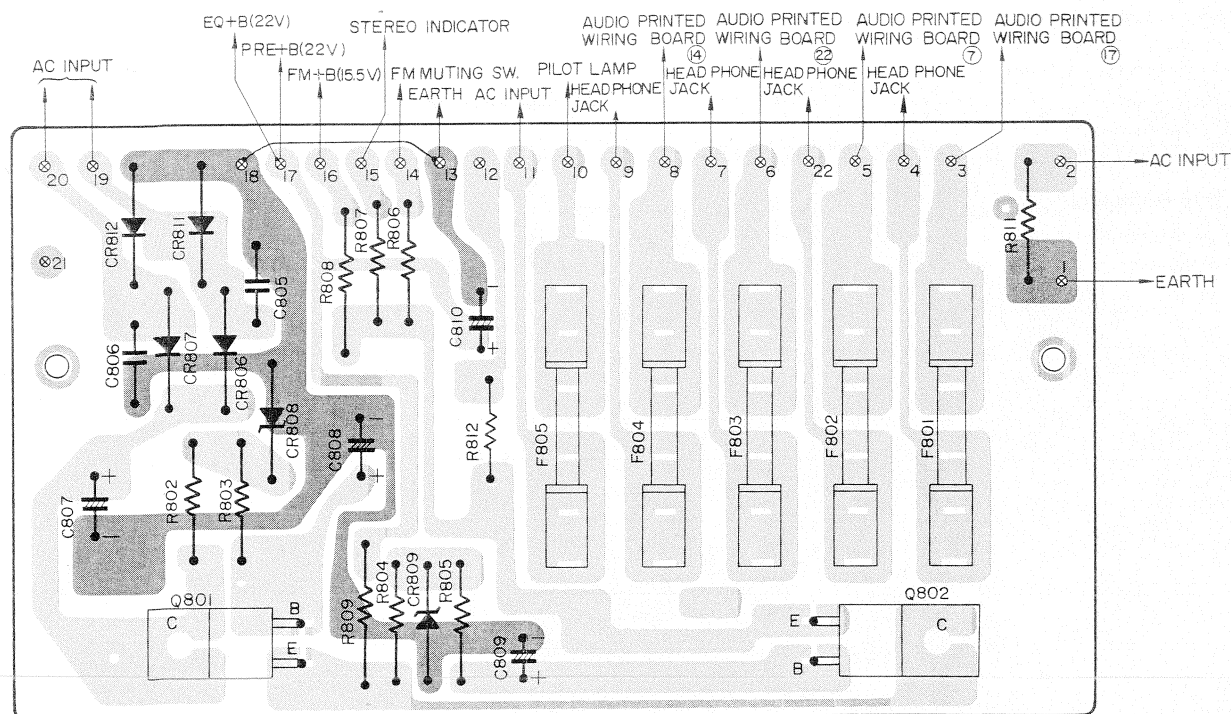
LAMP PRINTED WIRING BOARD

SMR - 5240

SMR-7240



DC SUB PRINTED WIRING BOARD



11. REPLACEMENT PARTS LIST

SYMBOL NO.		STOCK NO.	DESCRIPTION			SYMBOL NO.		STOCK NO.	DESCRIPTION		
CAPACITORS											
for TUNER PRINTED WIRING BOARD											
C101	0246464	Ceramic, discal	100pF±5%	50V		C160	0245018	Ceramic, discal	20000pF ±80/20%	25V	
C102	0246416	Ceramic, discal	6pF±0.25%	50V		C161	0248728	Ceramic, discal	150pF±10%	50V	
C103	0248676	Ceramic, discal	47pF±5%	50V		C162	0252811	Electrolytic	1μF	50V	
C104	0245017	Ceramic, discal	10000pF ±80/20%	25V		C163	0252811	Electrolytic	1μF	50V	
C105	0245017	Ceramic, discal	10000pF ±80/20%	25V		C164	0252525	Electrolytic	47μF	16V	
C106	0245017	Ceramic, discal	10000pF ±80/20%	25V		C165	0252811	Electrolytic	1μF	50V	
C107	0248632	Ceramic, discal	2pF±0.25%	50V		C166	0221513	Styrol	4700pF±5%	50V	
						C167	0245018	Ceramic, discal	20000pF ±80/20%	25V	
C109	0246449	Ceramic, discal	24pF±5%	50V		C169	0252813	Electrolytic	3.3μF	50V	
C110	0248362	Ceramic, discal	220pF±5%	50V		C170	0245018	Ceramic, discal	20000pF ±80/20%	25V	
C111	0245017	Ceramic, discal	10000pF ±80/20%	25V		C181	0245018	Ceramic, discal	20000pF ±80/20%	25V	
C112	0245017	Ceramic, discal	10000pF ±80/20%	25V		C185	0252811	Electrolytic	1μF	50V	
C113	0245017	Ceramic, discal	10000pF ±80/20%	25V		C186	0245018	Ceramic, discal	20000pF ±80/20%	25V	
C114	0248631	Ceramic, discal	1pF±0.25%	50V		C192	0245017	Ceramic, discal	10000pF ±80/20%	25V	
C115	0248176	Ceramic, discal	18pF±5%	50V		for EQUALIZER PRINTED WIRING BOARD					
C116	0248176	Ceramic, discal	18pF±5%	50V		C401(L,R)	0252522	Electrolytic	22μF	16V	
C117	0246417	Ceramic, discal	7pF±0.25%	50V		C402(L,R)	0248724	Ceramic, discal	100pF±10%	50V	
C118	0246444	Ceramic, discal	15pF±5%	50V		C404(L,R)	0248728	Ceramic, discal	150pF±10%	50V	
C120	0245017	Ceramic, discal	10000pF ±80/20%	50V		C405(L,R)	0252525	Electrolytic	47μF	16V	
C121	0245018	Ceramic, discal	20000pF ±80/20%	25V		C406(L,R)	0252861	Electrolytic	1μF	50V(KU)	
C122	0245018	Ceramic, discal	20000pF ±80/20%	25V		C407(L,R)	0274013	Mylar, film	2200pF±10%	50V	
C123	0274011	Mylar, film	1000pF±10%	50V		C408(L,R)	0274016	Mylar, film	6800pF±10%	50V	
C124	0245018	Ceramic, discal	20000pF ±80/20%	25V		C409	0252831	Electrolytic	100μF	50V	
C125	0248632	Ceramic, discal	2pF±0.25%	50V		for CONTROL PRINTED WIRING BOARD					
C126	0245018	Ceramic, discal	20000pF ±80/20%	25V		C501(L,R)	0252811	Electrolytic	1μF	50V	
C127	0245018	Ceramic, discal	20000pF ±80/20%	25V		C502(L,R)	0274014	Mylar, film	3300pF±10%	50V	
C128	0245018	Ceramic, discal	20000pF ±80/20%	25V		C503(L,R)	0252815	Electrolytic	4.7μF	50V	
C130	0252815	Electrolytic	4.7μF	50V		C504(L,R)	0276012	Mylar, film	0.15μF±10%	50V	
C131	0252815	Electrolytic	4.7μF	50V		C521 B	0275014	Mylar, film	0.033μF±10%	50V	
C132	0252811	Electrolytic	1μF	50V		C522 B	0276012	Mylar, film	0.15μF±10%	50V	
C133	0252815	Electrolytic	4.7μF	50V		C523 B	0252815	Electrolytic	4.7μF	50V	
C134	0276011	Mylar, film	0.1μF±10%	50V		C531 B	0275014	Mylar, film	0.033μF±10%	50V	
C135	0276011	Mylar, film	0.1μF±10%	50V		C532 B	0276012	Mylar, film	0.15μF±10%	50V	
C136	0228343	Styrol	2200pF±5%	50V		C533 B	0252815	Electrolytic	4.7μF	50V	
C137	(for U.S.A. & CANADA) 0275011	Mylar, film	10000pF±10%	50V		C601(LF,LF) (RF,RF)	0275014	Mylar, film	0.033μF±10%	50V	
	(for Europe & England) 0274015	Mylar, film	4700pF±10%	50V		C602(LF,LF) (RF,RF)	0252225	Electrolytic	47μF	6.3V	
C138	(for U.S.A. & CANADA) 0275011	Mylar, film	12000pF±10%	50V		C603(LF,RF) (LB,RF)	0252811	Electrolytic	1μF	50V	
	(for Europe & England) 0274015	Mylar, film	4700pF±10%	50V		C603(LB,RF)	0252861	Electrolytic	1μF	50V(KU)	
C139	0248636	Ceramic, discal	6pF±0.25%	50V		C606(LF,RF) (LF,RF)	0252811	Electrolytic	1μF	50V	
C140	0275016	Mylar, film	0.068μF±10%	50V		C607(LF,RF) (LF,RF)	0276011	Mylar, film	0.1μF±10%	50V	
C141	0248667	Mylar, film	20pF±5%	50V		C608(L,R)	0274013	Mylar, film	2200pF±10%	50V	
C142	0228324	Styrol	360pF±5%	50V		C609(L,R)	0275013	Mylar, film	0.022μF±10%	50V	
C143	0275011	Mylar, film	10000pF±10%	50V		C610(L,R)	0275011	Mylar, film	0.01μF±10%	50V	
C144	0245018	Ceramic, discal	20000pF ±80/20%	25V		C611(L,R)	0276011	Mylar, film	0.1μF±10%	50V	
C145	0245018	Ceramic, discal	20000pF ±80/20%	25V		C612	0252632	Electrolytic	220μF	25V	
C146	0252811	Electrolytic	1μF	50V		C613	0252632	Electrolytic	220μF	25V	
C147	0252813	Electrolytic	3.3μF	50V		C901(L,R)	0252811	Electrolytic	1μF	50V	
C148	0275011	Mylar, film	10000pF±10%	50V		C902(L,R)	0252525	Electrolytic	47μF	16V	
C150	0275015	Mylar, film	0.047μF±10%	50V		C903(L,R)	0252811	Electrolytic	1μF	50V	
C151	0275011	Mylar, film	10000pF±10%	50V		C904(L,R)	0248708	Ceramic, discal	22pF±5%	50V	
C152	0252525	Electrolytic	47μF	16V							
C153	0245018	Ceramic, discal	20000pF ±80/20%	25V							
C154	0248668	Ceramic, discal	22pF±5%	50V							
C156	0252813	Electrolytic	3.3μF	50V							
C158	0252813	Electrolytic	3.3μF	50V							
C159	0252532	Electrolytic	220μF	16V							

SYMBOL NO.	STOCK NO.	DESCRIPTION			SYMBOL NO.	STOCK NO.	DESCRIPTION		
C911	0252811	Electrolytic	1 μ F	50V	R111	0114135	Carbon film	150 Ω ±5%	SRD¼P
C912	0252525	Electrolytic	47 μ F	16V	R112	0114163	Carbon film	1.2k Ω ±5%	SRD¼P
C913	0252811	Electrolytic	1 μ F	50V	R113	0114177	Carbon film	4.7k Ω ±5%	SRD¼P
C914	0275012	Mylar, film	0.015 μ F±10%	50V	R114	0114205	Carbon film	15k Ω ±5%	SRD¼P
C921	0252811	Electrolytic	1 μ F	50V	R115	0114135	Carbon film	150 Ω ±5%	SRD¼P
C922	0248728	Ceramic, discal	150pF±5%	50V	R116	0114135	Carbon film	150 Ω ±5%	SRD¼P
C923	0252521	Electrolytic	10 μ F	16V	R117	0114131	Carbon film	100 Ω ±5%	SRD¼P
C924	0252861	Electrolytic	1 μ F	50V(KU)	R118	0114137	Carbon film	180 Ω ±5%	SRD¼P
C925	0274011	Mylar, film	1000pF±10%	50V	R119	0114169	Carbon film	2.2k Ω ±5%	SRD¼P
for AUDIO PRINTED WIRING BOARD					R120	0114143	Carbon film	330 Ω ±5%	SRD¼P
C701(LF,LF) (RF,RF)	0252813	Electrolytic	3.3 μ F	50V	R121	0114163	Carbon film	1.2k Ω ±5%	SRD¼P
C702(LF,LF) (RF,RF)	0252525	Electrolytic	47 μ F	16V	R122	0114135	Carbon film	150 Ω ±5%	SRD¼P
C703(LF,LF) (RF,RF)	0248684	Ceramic, discal	100pF±5%	50V	R123	0114143	Carbon film	330 Ω ±5%	SRD¼P
C704(LF,LF) (RF,RF)	0252723	Electrolytic	33 μ F	35V	R124	0114289	Carbon film	220k Ω ±5%	SRD¼P
C705(LF,LF) (RF,RF)	0252625	Electrolytic	47 μ F	25V	R125	0114149	Carbon film	560 Ω ±5%	SRD¼P
C706(LF,LF) (RF,RF)	0275016	Mylar, film	0.068 μ F±10%	50V	R126	0114169	Carbon film	2.2k Ω ±5%	SRD¼P
C707(LF,LF) (RF,RF)	0275016	Mylar, film	0.068 μ F±10%	50V	R127	0114149	Carbon film	560 Ω ±5%	SRD¼P
C708(LF,LF) (RF,RF)	0248650	Ceramic, discal	10pF±5%	50V	R128	0114149	Carbon film	560 Ω ±5%	SRD¼P
C710(LF,RF)	0248736	Ceramic, discal	330pF±10%	50V	R129	0114145	Carbon film	390 Ω ±5%	SRD¼P
C711(LF,RF)	0248650	Ceramic, discal	10pF±5%	50V	R130	0114209	Carbon film	22k Ω ±5%	SRD¼P
C801	0245408	Ceramic, discal	0.01 μ F±20%	500V	R131	0114209	Carbon film	22k Ω ±5%	SRD¼P
C802	0245408	Ceramic, discal	0.01 μ F±20%	500V	R132	0114177	Carbon film	4.7k Ω ±5%	SRD¼P
C803	0250319	Electrolytic	4700 μ F	35V	R136	0114165	Carbon film	1.5k Ω ±5%	SRD¼P
C804	0250319	Electrolytic	4700 μ F	35V	R137	0114177	Carbon film	4.7k Ω ±5%	SRD¼P
C811	0279936 (for Europe)	Mylar, film	0.1 μ F±20%	400V	R138	0114139	Carbon film	220 Ω ±5%	SRD¼P
for DC SUB PRINTED WIRING BOARD					R139	0114183	Carbon film	8.2k Ω ±5%	SRD¼P
C805	0245408	Ceramic, discal	0.01 μ F±20%	500V	R140	0114165	Carbon film	1.5k Ω ±5%	SRD¼P
C806	0245408	Ceramic, discal	0.01 μ F±20%	500V	R141	0114131	Carbon film	100 Ω ±5%	SRD¼P
C807	0252833	Electrolytic	330 μ F	50V	R142	0114221	Carbon film	68k Ω ±5%	SRD¼P
C808	0252735	Electrolytic	470 μ F	35V	R143	0114169	Carbon film	2.2k Ω ±5%	SRD¼P
C809	0252631	Electrolytic	100 μ F	25V	R144	0114133	Carbon film	120 Ω ±5%	SRD¼P
C810	0252632	Electrolytic	220 μ F	25V	R145	0114217	Carbon film	47k Ω ±5%	SRD¼P
for CHASSIS ASSEMBLY					R146	0114171	Carbon film	2.7k Ω ±5%	SRD¼P
C 1	(for U.S.A. & CANADA)		4700pF ±80/20%	500V	R147	0114205	Carbon film	15k Ω ±5%	SRD¼P
	0243873	Ceramic, discal			R148	0114217	Carbon film	47k Ω ±5%	SRD¼P
	(for Europe & England)		4700pF±20%	250V	R149	0114217	Carbon film	47k Ω ±5%	SRD¼P
	0243875	Ceramic, discal			R150	0114175	Carbon film	3.9k Ω ±5%	SRD¼P
C 2	0245018	Ceramic, discal	0.02 μ F ±80/20%	25V	R151	0114161	Carbon film	1k Ω ±5%	SRD¼P
C 3	0245017	Ceramic, discal	0.01 μ F ±80/20%	250V	R152	0114131	Carbon film	100 Ω ±5%	SRD¼P
RESISTORS					R153	0114177	Carbon film	4.7k Ω ±5%	SRD¼P
for TUNER PRINTED WIRING BOARD					R155	0114209	Carbon film	22k Ω ±5%	SRD¼P
R101	0114283	Carbon film	120k Ω ±5%	SRD¼P	R156	0114177	Carbon film	4.7k Ω ±5%	SRD¼P
R102	0114289	Carbon film	220k Ω ±5%	SRD¼P	R157	0114281	Carbon film	100k Ω ±5%	SRD¼P
R103	0114059	Carbon film	56 Ω ±5%	SRD¼P	R158	0114287	Carbon film	180k Ω ±5%	SRD¼P
R104	0114295	Carbon film	390k Ω ±5%	SRD¼P	R159	0114153	Carbon film	820 Ω ±5%	SRD¼P
R105	0114147	Carbon film	470 Ω ±5%	SRD¼P	R160	0114217	Carbon film	47k Ω ±5%	SRD¼P
R106	0114135	Carbon film	150 Ω ±5%	SRD¼P	R161	0114179	Carbon film	5.6k Ω ±5%	SRD¼P
R107	0114205	Carbon film	15k Ω ±5%	SRD¼P	R162	0114161	Carbon film	1k Ω ±5%	SRD¼P
R108	0114175	Carbon film	3.9k Ω ±5%	SRD¼P	R163	0114161	Carbon film	1k Ω ±5%	SRD¼P
R109	0114161	Carbon film	1k Ω ±5%	SRD¼P	R166	0114215	Carbon film	39k Ω ±5%	SRD¼P
R110	0114163	Carbon film	1.2k Ω ±5%	SRD¼P	R181	0114149	Carbon film	560 Ω ±5%	SRD¼P
for EQUALIZER PRINTED WIRING BOARD					R182	0114211	Carbon film	27k Ω ±5%	SRD¼P
R401(L,R)	0114223	Carbon film	82k Ω ±5%	SRD¼P	R183	0114211	Carbon film	27k Ω ±5%	SRD¼P
R402(L,R)	0114173	Carbon film	3.3k Ω ±5%	SRD¼P	R185	0114169	Carbon film	2.2k Ω ±5%	SRD¼P
					R186	0138217	Carbon film	470k Ω ±5%	SRD¼SD
					R187	0138061	Carbon film	68 Ω ±5%	SRD¼SD

MODEL SMR-5240 SMR-7240 SERVICE MANUAL

NOTE: * marked parts used for SMR - 5240
 ○ marked parts used for SMR - 7240

SYMBOL NO.	STOCK NO.	DESCRIPTION			SYMBOL NO.	STOCK NO.	DESCRIPTION		
R404(L,R)	0114151	Carbon film	680Ω±5%	SRD¼P	R615(L,R)	0114173	Carbon film	3.3kΩ±5%	SRD¼P
R405(L,R)	0114281	Carbon film	100kΩ±5%	SRD¼P	R616(L,R)	0114205	Carbon film	15kΩ±5%	SRD¼P
R406(L,R)	0114283	Carbon film	120kΩ±5%	SRD¼P	R617(L,R)	0114163	Carbon film	1.2kΩ±5%	SRD¼P
R407(L,R)	0114175	Carbon film	3.9kΩ±5%	SRD¼P	R618(L,R)	0114221	Carbon film	68kΩ±5%	SRD¼P
R408(L,R)	0114153	Carbon film	820Ω±5%	SRD¼P	R619(L,R)	0114181	Carbon film	6.8kΩ±5%	SRD¼P
R409(L,R)	0114143	Carbon film	330Ω±5%	SRD¼P	R620	0114059	Carbon film	56Ω±5%	SRD¼P
R410(L,R)	0114219	Carbon film	56kΩ±5%	SRD¼P	R621	0119061	Metal	100Ω±10%	RN1B
R411(L,R)	0114161	Carbon film	1kΩ±5%	SRD¼P	R622(LB,RF)	0114177	Carbon film	4.7kΩ±5%	SRD¼P
R412(L,R)	0114297	Carbon film	470kΩ±5%	SRD¼P	R901(L,R)	0114161	Carbon film	1kΩ±5%	SRD¼P
R413(L,R)	0114213	Carbon film	33kΩ±5%	SRD¼P	R902(L,R)	0114221	Carbon film	68kΩ±5%	SRD¼P
R414	0134365	Composition	220Ω±10%	RC½GF	R903(L,R)	0114177	Carbon film	4.7kΩ±5%	SRD¼P
for CONTROL PRINTED WIRING BOARD					R904(L,R)	0114217	Carbon film	47kΩ±5%	SRD¼P
R501(L,R)	0114161	Carbon film	1kΩ±5%	SRD¼P	R905(L,R)	0114179	Carbon film	5.6kΩ±5%	SRD¼P
R502(L,R)	0114283	Carbon film	120kΩ±5%	SRD¼P	R906(L,R)	0114145	Carbon film	390Ω±5%	SRD¼P
R503(L,R)	0114219	Carbon film	56kΩ±5%	SRD¼P	R907(L,R)	0114281	Carbon film	100kΩ±5%	SRD¼P
R504(L,R)	0114163	Carbon film	1.2kΩ±5%	SRD¼P	R911	0114161	Carbon film	1kΩ±5%	SRD¼P
R505(L,R)	0114163	Carbon film	1.2kΩ±5%	SRD¼P	R912	0114221	Carbon film	68kΩ±5%	SRD¼P
R506(L,R)	0114213	Carbon film	33kΩ±5%	SRD¼P	R913	0114177	Carbon film	4.7kΩ±5%	SRD¼P
R507(L,R)	0114203	Carbon film	12kΩ±5%	SRD¼P	R914	0114217	Carbon film	47kΩ±5%	SRD¼P
R508(L,R)	0114297	Carbon film	470kΩ±5%	SRD¼P	R915	0114179	Carbon film	5.6kΩ±5%	SRD¼P
R509(L,R)	0114217	Carbon film	47kΩ±5%	SRD¼P	R916	0114147	Carbon film	470Ω±5%	SRD¼P
R510(L,R)	0114213	Carbon film	33kΩ±5%	SRD¼P	R921	0114173	Carbon film	3.3kΩ±5%	SRD¼P
R511(L,R)	0114281	Carbon film	100kΩ±5%	SRD¼P	R922	0114223	Carbon film	82kΩ±5%	SRD¼P
R512(L,R)	0114213	Carbon film	33kΩ±5%	SRD¼P	R923	0114149	Carbon film	560Ω±5%	SRD¼P
R513 L	0114283	Carbon film	120kΩ±5%	SRD¼P	R924	0114217	Carbon film	47kΩ±5%	SRD¼P
R513 R	0138203	Carbon film	120kΩ±5%	SRD¼SD	R925	0114175	Carbon film	3.9kΩ±5%	SRD¼P
R514(L,R)	0114283	Carbon film	120kΩ±5%	SRD¼P	R926	0114143	Carbon film	330Ω±5%	SRD¼P
R521 B	0114213	Carbon film	33kΩ±5%	SRD¼P	R927	0114289	Carbon film	220kΩ±5%	SRD¼P
R522 B	0114283	Carbon film	120kΩ±5%	SRD¼P	R928(L,R)	0114297	Carbon film	470kΩ±5%	SRD¼P
R523 B	0114161	Carbon film	1kΩ±5%	SRD¼P	R931(L,R)	0114215	Carbon film	39kΩ±5%	SRD¼P
R524 B	0114169	Carbon film	2.2kΩ±5%	SRD¼P	R932(L,R)	0114293	Carbon film	330kΩ±5%	SRD¼P
R525 B	0114169	Carbon film	2.2kΩ±5%	SRD¼P	R933(L,R)	0114283	Carbon film		SRD¼P
R526 B	0114179	Carbon film	5.6kΩ±5%	SRD¼P	for AUDIO PRINTED WIRING BOARD				
R527 B	0114217	Carbon film	47kΩ±5%	SRD¼P	R701(LF,LF) (RF,RF)	0114173	Carbon film	3.3kΩ±5%	SRD¼P
R528 B	0114297	Carbon film	470kΩ±5%	SRD¼P	R702(LF,LF) (RF,RF)	0114217	Carbon film	47kΩ±5%	SRD¼P
R529 B	0114209	Carbon film	22kΩ±5%	SRD¼P	R703(LF,LF) (RF,RF)	0114163	Carbon film	1.2kΩ±5%	SRD¼P
R530 B	0114281	Carbon film	100kΩ±5%	SRD¼P	R704(LF,LF) (RF,RF)	0114179	Carbon film	5.6kΩ±5%	SRD¼P
R531 B	0114201	Carbon film	10kΩ±5%	SRD¼P	*R705(LF,LF) (RF,RF)	0114149	Carbon film	560Ω±5%	SRD¼P
R532 B	0114213	Carbon film	33kΩ±5%	SRD¼P	○R705(LF,RF)	0114147	Carbon film	470Ω±5%	SRD¼P
R533 B	0114281	Carbon film	100kΩ±5%	SRD¼P	○R705(LB,RF)	0114145	Carbon film	390Ω±5%	SRD¼P
R534 B	0114217	Carbon film	47kΩ±5%	SRD¼P	R706(LF,LF) (RF,RF)	0114217	Carbon film	47kΩ±5%	SRD¼P
R535 B	0114287	Carbon film	180kΩ±5%	SRD¼P	R707(LF,LF) (RF,RF)	0119061	Metal	100Ω±10%	RN1B
R536 B	0114209	Carbon film	22kΩ±5%	SRD¼P	R708(LF,LF) (RF,RF)	0114165	Carbon film	1.5kΩ±5%	SRD¼P
R537 B	0114201	Carbon film	10kΩ±5%	SRD¼P	*R709(LF,LF) (RF,RF)	0114167	Carbon film	1.8kΩ±5%	SRD¼P
R538 B	0114207	Carbon film	18kΩ±5%	SRD¼P	○R709(LF,LF) (RF,RF)	0114169	Carbon film	2.2kΩ±5%	SRD¼P
R539 B	0114207	Carbon film	18kΩ±5%	SRD¼P	*R710(LF,LF) (RF,RF)	0114053	Carbon film	33Ω±5%	SRD¼P
R541	0114283	Carbon film	120kΩ±5%	SRD¼P	○R710(LF,LF) (RF,RF)	0134294	Composition	27Ω±10%	RC½GF
R542	0114217	Carbon film	47kΩ±5%	SRD¼P	R711(LF,LF) (RF,RF)	0114139	Carbon film	220Ω±5%	SRD¼P
R543	0114217	Carbon film	47kΩ±5%	SRD¼P	R712(LF,LF) (RF,RF)	0114049	Carbon film	22Ω±5%	SRD¼P
R544	0114281	Carbon film	100kΩ±5%	SRD¼P	R713(LF,LF) (RF,RF)	0114139	Carbon film	220Ω±5%	SRD¼P
R545	0114221	Carbon film	68kΩ±5%	SRD¼P	R714(LF,LF) (RF,RF)	0119127	Metal	0.47Ω±10%	RN2B
R601(LF,LF) (RF,RF)	0114161	Carbon film	1kΩ±5%	SRD¼P	R715(LF,LF) (RF,RF)	0119127	Metal	0.47Ω±10%	RN2B
R602(LF,LF) (RF,RF)	0114221	Carbon film	68kΩ±5%	SRD¼P	R716(LF,LF) (RF,RF)	0134289	Composition	10Ω±10%	RC½GF
R603(LF,LF) (RF,RF)	0114211	Carbon film	27kΩ±5%	SRD¼P	R717(LB,RF)	0114217	Carbon film	47kΩ±5%	SRD¼P
R604(LF,LF) (RF,RF)	0114223	Carbon film	82kΩ±5%	SRD¼P	R801	0134371	Composition	680Ω±10%	RC½GF
R605(LF,LF) (RF,RF)	0114177	Carbon film	4.7kΩ±5%	SRD¼P	for DC SUB PRINTED WIRING BOARD				
R606(LF,LF) (RF,RF)	0114171	Carbon film	2.7kΩ±5%	SRD¼P	R802	0134373	Composition	1kΩ±10%	RC½GF
R607(LF,RF)	0114285	Carbon film	150kΩ±5%	SRD¼P	R803	0134371	Composition	680Ω±10%	RC½GF
R608(LF,RF)	0114161	Carbon film	1kΩ±5%	SRD¼P	R804	0134372	Composition	820Ω±10%	RC½GF
R609(LF,RF)	0114209	Carbon film	22kΩ±5%	SRD¼P					
R610(LF,RF)	0114283	Carbon film	120kΩ±5%	SRD¼P					
R611(LF,RF)	0114171	Carbon film	2.7kΩ±5%	SRD¼P					
R612(LF,RF)	0114141	Carbon film	270Ω±5%	SRD¼P					

SYMBOL NO.		STOCK NO.	DESCRIPTION			SYMBOL NO.		STOCK NO.	DESCRIPTION				
R805		0134371	Composition	680Ω±10%	RC½GF	for DC SUB PRINTED WIRING BOARD							
R806		0134382	Composition	5.6kΩ±10%	RC½GF	Q801		2327202	2SC1060(B)				
R807		0134366	Composition	270Ω±10%	RC½GF	Q802		2327202	2SC1060(B)				
R808		0119041	Metal	10Ω±10%	RN1B								
R809		0119050	Metal	56Ω±10%	RN1B								
R811		0139005	Composition	2.7MΩ±10%	RC½GF	DIODES							
R812		0119063	Metal	150Ω±10%	RN1B	for TUNER PRINTED WIRING BOARD							
for CHASSIS ASSEMBLY						CR101						2337011	1S2076
R 1		0134366	Composition	270Ω±10%	RC½GF	CR102		2337011	1S2076				
R 2		0134366	Composition	270Ω±10%	RC½GF	CR103		2337011	1S2076				
R 3		0134366	Composition	270Ω±10%	RC½GF	CR104		0575002	1N34A				
R 4		0134366	Composition	270Ω±10%	RC½GF	CR105		0575002	1N34A				
						CR106		0575019	1N60 (P)				
						CR107		0575019	1N60 (P)				
TRANSISTORS						CR110		2337101	HZ - 12 (A)				
for TUNER PRINTED WIRING BOARD						CR112		2337011	1S2076				
FET101		2327431	3SK45			for AUDIO PRINTED WIRING BOARD							
IC101		2327312	HA1201			CR701		2347043	MV - 5T				
IC102		2327411	HA1202			CR801		2337111	SR3AM - 8				
IC103		2327422	HA1115 (W)			CR802		2337111	SR3AM - 8				
Q101		0573510	2SC535 (B)			CR803		2337111	SR3AM - 8				
Q102		0573507	2SC461 (B)			CR804		2337111	SR3AM - 8				
Q103		0573486	2SC460 (B)			CR805		2337101	HZ - 12 (A)				
Q104		0573486	2SC460 (B)			for DC SUB PRINTED WIRING BOARD							
Q105		0573491	2SC454 (B)			CR806		2327041	VO6C				
Q106		2320063	2SC458 (C)			CR807		2327041	VO6C				
Q107		2320063	2SC458 (C)			CR808		2327079	AW01 - 27				
Q108		0573486	2SC460 (B)			CR809		2337065	AW01 - 16				
for EQUALIZER PRINTED WIRING BOARD						CR811		2327041	VO6C				
Q401(L,R)		2320073	2SC458LG(C)			CR812		2327041	VO6C				
Q402(L,R)		2327443	2SC1344(E)			VARIABLE RESISTORS							
for CONTROL PRINTED WIRING BOARD						for TUNER PRINTED WIRING BOARD							
Q501		2327443	2SC1344 (E)			VR101		0151225	50kΩ - (B)				
Q502		2327443	2SC1344 (E)			VR102		0151282	1kΩ - (B)				
Q503		2327443	2SC1344 (E)			VR103		0151224	10kΩ - (B)				
Q504		2327443	2SC1344 (E)			VR104		0151224	10kΩ - (B)				
Q601		2327443	2SC1344 (E)			VR105		0151224	10kΩ - (B)				
Q602		2327443	2SC1344 (E)			VR106		0151281	20kΩ - (B)				
Q603		2327443	2SC1344 (E)			VR107		0151282	1kΩ - (B)				
Q604		2327443	2SC1344 (E)			for CONTROL PRINTED WIRING BOARD							
Q605		2327443	2SC1344 (E)			VR601		0155001	100kΩ - (B)	VOLUME			
Q607		2327443	2SC1344 (E)			VR602(L,R)		0151703	100kΩ - (A)	TREBLE			
Q901		2327443	2SC1344 (E)			VR603(L,R)		0151703	100kΩ - (A)	BASS			
Q902		2327443	2SC1344 (E)			* VR604		0155461	250kΩ - (W)	BALANCE			
Q903		2327443	2SC1344 (E)			VR901		0151811	50kΩ - (B)	MIC MIXING			
Q904		2327443	2SC1344 (E)			for AUDIO PRINTED WIRING BOARD							
Q905		2327443	2SC1344 (E)			VR701		0151224	10kΩ - (B)				
for AUDIO PRINTED WIRING BOARD						for CHASSIS ASSEMBLY							
Q701		2327365	2SC1345 (E)			*VR601		0158001	100kΩ - (B)	MASTER VOLUME			
Q702		2327365	2SC1345 (E)										
Q703		2327282	2SA673A (B)										
Q704		2327292	2SC1213A (B)										
Q705		2327282	2SA673A (B)										
Q706		2327202	2SC1060 (B)										
Q707		2327202	2SC1060 (B)										

MODEL SMR-5240 SERVICE MANUAL

SMR-7240

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
COILS & TRANSFORMERS					
for TUNER PRINTED WIRING BOARD					
L101	2134411	FM antenna coil		2767201	Lamp - pilot lamp (6.3V, 0.25A)
L102	2134419	FM RF coil		2767116	Lamp - pilot lamp (6.3V, 65mA)
L103	2227081	Choke coil (1μH)		2767232	Lamp - pilot lamp (8V, 30mA)
L104	2134416	FM OSC coil		2637324	Switch - push switch (for power sw.)
L106	2134392	19kHz coil		2637432	Switch - push switch (for tape monitor sw. others)
L107	2134373	38kHz coil		2627012	Switch - slide switch (for PHONO, AUX sw.)
L108	2134431	AM OSC coil		2617331	Switch - rotary switch (for mode sw.)
L109	2134371	19kHz coil		2617441	Switch - rotary switch (for speakers sw.)
T101	2154172	FM IF transformer		2740241	AC power cord
T102	0322203	FM IF transformer		0043793	Bushing (for AC power cord)
T103	2154199	FM IF transformer		4368521	AC bush plate
T104	2154161	AM IF transformer		2747481	AC power cord
T105	2154199	FM IF transformer		3913001	Bushing (for AC power cord)
T106	2154122	AM IF transformer		4368525	AC bush plate
T107	2154201	FM discriminator transformer		2787221	Belt (for AC power cord)
T108	2154183	AM IF transformer		2747732	AC power cord
T109	2140155	FM IF transformer		3913005	Bushing (for AC power cord)
for CHASSIS ASSEMBLY				4368525	AC bush plate
L 1	2227032	Choke coil (2.2μH)		2727241	Holder - fuse holder
MISCELLANEOUS				2727222	Fuse - fuse (2.5A, FAST) (for U.S.A. & CANADA)
	2519194	Tuner printed wiring board assembly (for U.S.A. & CANADA)		2720063	Fuse - fuse (1A, FAST) (for Europe & England)
	2519199	Tuner printed wiring board assembly (for Europe & England)		2727223	Fuse - fuse (3A, FAST)
	2519463	Equalizer printed wiring board assembly		2677181	1P US pin jack
	2519904	Control printed wiring board assembly (for SMR-5240)		2677161	8P US pin jack
	2519901	Control printed wiring board assembly (for SMR-7240)		2687411	Terminal - 3P screw terminal
	2505012	Audio printed wiring board assembly (for U.S.A. & CANADA-SMR-5240)		2687431	Terminal - 8P push terminal
	2505014	Audio printed wiring board assembly (for Europe & England-SMR-5240)		4562401	Screw - earth screw
	2505011	Audio printed wiring board assembly (for U.S.A. & CANADA-SMR-7240)		2687371	4P terminal board (for Europe & England)
	2505013	Audio printed wiring board assembly (for Europe & England-SMR-7240)		2677064	Jack - headphone jack
	2519931	DC sub printed wiring board assembly		0159072	4 channel controller (for SMR-7240)
	2519251	Lamp printed wiring board assembly		for DIAL MECHANISM ASSEMBLY	
CP 1	0269015	CR multiple component		3198951	Dial scale (for SMR-5240)
CP101	0186022	CR multiple component		3198961	Dial scale (for SMR-7240)
CP102	0186041	CR multiple component		3386614	Dial pointer
CP103	0186011	CR multiple component		4569101	Tuning shaft assembly
CP104	0186011	CR multiple component		3915651	Pulley - 30 φ pulley
CP105	0186031	CR multiple component		3918673	Film (for dial scale)
VC101	0281169	FM AM variable capacitor		for FINAL ASSEMBLY	
TC103	0283121	Trimmer capacitor		3243011	Escutcheon assembly (for SMR-5240)
	2217831	Power transformer (for SMR-5240) (for U.S.A. & CANADA)		3243012	Escutcheon assembly (for SMR-7240)
	2217821	Power transformer (for SMR-7240) (for U.S.A. & CANADA)		3281871	Knob - Tuning knob
	2217861	Power transformer (for SMR-5240) (for Europe & England)		3281872	Knob - Volume knob (for SMR-5240)
	2217851	Power transformer (for SMR-7240) (for Europe & England)		3281852	Knob - Volume knob (for SMR-7240)
	2134404	Ferrite antenna		3281852	Knob - Speakers, Mode knob
	4125642	Washer - 10 φ washer		3281853	Knob - Balance knob (for left - right) (for SMR-5240)
	4790096	Washer - 8 φ washer		3919571	Knob - Balance knob (for front - rear) (for SMR-5240)
	8811114	Washer - 3 φ washer		3281862	Knob - Bass, Treble, Mic mixing knob
	4567411	3 x 6 φ bind screw		2677103	Jack - microphone jack
	4784101	3 x 8 φ bind tapping screw		3914611	Washer - 13.5 φ washer
	4130182	4 x 10 φ bind tapping screw		4368861	Washer - 13.2 φ washer
	2577126	Signal meter		4511351	Bolt - 4 φ x 18 bolt
	2577127	Center meter (for SMR-7240)		0040045	Washer for chassis mounting
	2720022	Socket - lamp socket		4567451	3 x 6 φ bind screw
	0541358	Socket - DIN 5P socket		for CABINET ASSEMBLY	
	2657211	Socket - AC socket (UL) (for U.S.A. & CANADA)		9403026	Cabinet assembly (Walnut)
				9403027	Cabinet assembly (Teak - for England only)
				9403033	Cabinet assembly (Walnut)
				9403034	Cabinet assembly (Teak - for England only)
				3916411	Leg



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